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ABSTRACT.

Based on reports from the Northwest Regional Educational Laboratory and on interviews with directors of seven other regional educational research laboratories, this report summarizes critical elements that have enabled the laboratories to sustain a viable set of research and development activities. A brief review is presented of: (1) the purpose and procedures of the study; (2) the historical perspective of regional educational laboratories; (3) the essential ingredients of a successful regional educational laboratory; and (4) recommendations for planning a new regional laboratory. (JD)

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THE REGIONAL LABORATORY CONNECTION



Improving Educational Practices through Systematic Research and Development



Northwest
Regional
Educational
Laboratory

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EXECUTIVE SUMMARY

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION

M. MARGARET ROGERS

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THE REGIONAL LABORATORY CONNECTION

Improving Educational Practices
Through Systematic Research and Development

EXECUTIVE SUMMARY

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FOREWORD

I share with you the great hopes for these laboratories. They should be large and significant enterprises. They ought to be conceived as comparable in their way to the large-scale laboratories of the Defense and Atomic Energy establishments. Nothing less will do. Their missions are equally important.

Lyndon B. Johnson
July 5, 1966

Regional educational laboratories are a unique resource in America's educational system. Their mission is to connect the often separate educational interests of a region and the nation to improve educational practices for all. A regional "laboratory" is not a place where staff wear white coats but includes the classrooms and administrative offices of schools, colleges, universities and other agencies interested in using educational research and development techniques to further our collective understanding of teaching and learning and the support systems that make these functions happen.

This study comes at a unique juncture in the development of regional educational laboratories. Ten years of service has been a learning experience in itself. This self-examination by laboratory personnel of what laboratories are and can be is designed to help policymakers and planners alike consider ways to make the laboratory connection even stronger--both in regions where access is important and nationally where interaction is critical. Copies of the 237 page final report are available from the National Institute of Education.

PURPOSE AND PROCEDURES

With commitment to regional laboratories reaffirmed by Congressional action and National Council on Educational Research (NCER) policy in 1976, the National Institute of Education's internal task force on labs and centers defined a strategy for reexamining the unique contributions of regional education laboratories--those R&D performers that share one unique tie: well-established roots in a geographic sector of the nation. An immediate yet persistent concern was the need to provide nationwide coverage as originally envisioned in the 1960s.

Several policy studies were proposed for planning purposes, with emphasis on what regionality means in operational terms. As part of this effort, Northwest Regional Educational Laboratory agreed to look back on its own history and compare its approach to styles of other laboratories. The Institute's interest was how well the most common elements might be "transported" or adapted to new settings should regions now uncovered seek to establish similar comprehensive R&D capabilities.

To accomplish these tasks, Larry McClure--a senior associate in NWREL's Education and Work Program--was selected to coordinate the study. McClure has been an R&D specialist at NWREL since July, 1971. Before joining the laboratory, he was a teacher, state education agency specialist and university school service bureau staff member.

On December 17, 1976, a staff/board task force was convened at NWREL as the first step in the identification of "critical ingredients" in NWREL's approach to R&D. Using the categories resulting from that day-long sifting process, interview materials were prepared for the next phase: a verification with practitioners in the Northwest region to determine if in fact these are the critical elements that have contributed to NWREL's ability to sustain a viable set of R&D activities.

Almost 50 persons from the Northwest region representing nine viewpoints (for example, clients, collaborators, critics) were interviewed during a three-week period in January, 1977, using structured as well as open-ended discussion guides.

To determine if other laboratories share these views of critical ingredients, on-site interviews were held with the directors and chairpersons of four other regional laboratories. This phase of the study placed much more emphasis on why each region requires a different approach in building an R&D capability. Laboratories selected for on-site interviews were Appalachia Educational Laboratory in Charleston, West Virginia; Far West Laboratory for Educational Research and Development in San Francisco; Research for Better Schools in Philadelphia; and Southwest Educational Development Laboratory in Austin, Texas.

As the first drafts of the analysis were being developed in early April, a final check was made to see if the same critical issues held up for the remaining three laboratories by conducting hour-long telephone interviews with directors of CEMREL, Inc., St. Louis, Missouri; SWRL Educational Research and Development in Los Alamitos, California; and Mid-continent Regional Educational Laboratory in Kansas City, Missouri.

Highlights of the study were then shared with directors of the eight laboratories prior to a May 4-6 workshop sponsored by NIE. During a three-hour segment at that session, directors and NIE staff representatives discussed how they would help a new laboratory approach three selected problems: (1) clarifying its mission (what capabilities or functions should a regional laboratory offer); (2) defining a region (what are the dimensions of regionality besides geography); and (3) organizing for work (how a comprehensive R&D institution should balance activities and priorities).

Results of these discussions and directors' comments on a preliminary draft of the final report were subsequently incorporated into the completed document.

HISTORICAL PERSPECTIVE

This story begins in 1966 when, based on authority contained in the Cooperative Research Act as amended by Title IV of the Elementary and Secondary Education Act of 1965 (P.L. 89-10), the U.S. Office of Education authorized 20 regional educational laboratories to be

- independent, nonprofit institutions
- geographically distributed with programs based on locally determined needs of a region
- multi-disciplinary, with functions to include research, development, dissemination, training, and technical assistance to schools.

Prior to the mid-1960s, R&D was likened to the high visibility curriculum building program that gained notoriety during the post-Sputnik era. Yet, others saw the need for an educational R&D system comparable in size and influence to the major R&D centers in agriculture, aerospace, medicine and defense. Educators had few places to turn for help with some of their most complex and comprehensive problems.

Grassroots concerns were these:

- Where can we obtain advice on planned change in education?
- Where can we find useful knowledge in validated, readily-available forms?
- Where can we find help, starting with need identification continuing through need resolution?
- Where is there a management capacity to pull together teams of specialists to accomplish that work?
- Where can we find a neutral place where, the resources of all education-related agencies, organizations and individuals can be utilized?

To understand how a network of 20 regionally-based educational laboratories in 1966 has now become a loosely-knit coalition of eight organizations covering only 26 states in 1977 requires a careful review of key documents, interviews with key actors and an historian's interest in documenting the political interactions which made milestones like these important:

April, 1965	ESEA enacted, with Title IV authorizing regional laboratories
February to September, 1966	Planning grants awarded to consortia across the nation followed by operational and developmental contracts to 20 laboratories
November, 1966	Critical reviews of laboratory efforts result in first external analysis (Francis Chase)
1967-68	Federal policy shifts emphasis to product development designed to speed delivery of helpful tools to practitioners; dollar squeeze begins to force laboratories to look outside USOE for funding
1968	USOE discontinues five laboratories
1969	Council for Educational Development and Research (CEDaR) becomes private, nonprofit, informational arm for labs and centers
1970	USOE discontinues four laboratories
1971	Federal policy speaks of "institutional maturity" whereby laboratories will become less reliant on sheltered support; competitive procurement (program purchase) procedures are used to contract for specified programs on a two- to three-year basis

- 1972 USOE transfers laboratory efforts to newly-created NIE where R&D activities are scattered among various program units; laboratories turn to management fees and overhead funds to support certain basic institutional functions; three more laboratories disappear from the network leaving eight.
- 1975 Second major external review of federal R&D is conducted, including an analysis of laboratory potential (Roald Campbell, et al)
- 1976-77 Congress declares intent to cover nation with regional R&D system; NIE adopts special institutional relationship policy requiring laboratories to submit 3-5 year plans that include regional service configurations. By this point in time, some labs rely on NIE for less than half their annual revenue.

The pulls and tugs that laboratories have faced, then, have been several:

- In the beginning, each institution had a fair share of autonomy regarding R&D objectives, strategies, organization and staffing with federal coordination in a central spot.
- The promise of ample funding for educational R&D never materialized, prompting some laboratories to pursue other funds to support their missions.
- The shift from institutional support to "program purchase" meant laboratories needed to give less attention to regional constituency building while scrambling for available dollars just to survive.
- Meanwhile, federal policy shifts and agency personnel changes have been frequent, leaving key staff and board members in each laboratory to provide planning continuity.

ESSENTIAL INGREDIENTS OF A REGIONAL EDUCATIONAL LABORATORY

Based on an in-depth analysis of Northwest Regional Educational Laboratory's approach to R&D, interviews with selected NWREL constituents, and conversations with decision/makers in seven other regional laboratories, the following critical elements are shared with planners of new laboratories as one indication of the wisdom accumulated during the past ten years.

Do We Need This Kind of Institution Anyway?

Creating new institutions called regional educational laboratories in 1965-1966 invited the inevitable question: Why? Planners of new regional R&D institutions for the 1980s must be prepared to answer questions like: Whose needs will be served? How will existing institutions fit in the scheme? Is the mission clear enough to guide both policy and performance but broad enough to respond to emerging needs? Is it not only documented, for all to see but does it consistently guide board and staff actions?

Regional laboratories distinguish themselves from other R&D performers by maintaining

- The capacity for conducting large-scale programmatic R&D as well as smaller scale problem-solving efforts which have more immediate pay-off. The two capabilities are, in fact, interactive.
- A commitment to drawing persons together from diverse perspectives to accomplish some common cause
- An interest in showing others how to apply R&D findings in their own settings
- A pool of highly skilled staff able to move quickly to accomplish R&D tasks
- A reputation gradually accumulated in a number of specialties

Persons associated with laboratories believe their institutions are in a unique position to improve educational practices--listening, always prodding, always looking ahead to ways they can be responsive.

How to Establish Identity

Crossing state boundaries to identify and solve regional needs and problems holds great promise as a way to foster dialogue and share resources. Yet, there are dangers to be reckoned with as well: political territories often make little sense, but they represent powerful forces as public and private interest groups maintain their traditional roles and functions. Their first allegiance is to themselves and their own constituencies--not necessarily a "third-party" regional organization.

Initial constituency-building for a new laboratory demands that a wide range of individuals and organizations be brought into the process. Teachers, for instance, have the opportunity for as much input as college deans or state agency representatives. Interim laboratory staff spend considerable time in the field ascertaining regional interest but leaving to representatives from likely states the responsibility for coalescing support and building two-way communication linkages with state and local agencies, higher education, community colleges, teacher and school board associations,

special interest organizations and various community groups. Involving persons with experience in R&D is also useful.

As part of this alliance-building process, planners of a new laboratory will inventory available resources to ascertain how the new institution will relate to other R&D performers. They will recognize the very real influence of local, intermediate and state political factors during this stage and will work equally hard at laying a political foundation in Washington D.C. The planning committee will include persons widely-known by their constituencies. State education agencies will be represented in the planning process because of their pivotal role in elementary and secondary education.

What Does A Region Mean?

Recognizing that political realities and traditional habits do exist, it has still been useful to establish one geographic area that serves as the focal point for laboratory operations. This does not mean that many common problems and interests are not shared by agencies outside a target region or that the laboratory may not conduct activities nationally or even internationally. Having a home territory, however, provides a solid base for governance, a natural setting for identifying R&D needs and testing new ideas, and a reality check when defining purposes and establishing priorities.

Six factors have emerged as the laboratories carve out a regional identity. Some of these characteristics will appear over time; others will be recognized at the outset. (1) Symbiosis is a natural linkage of social, cultural and physical characteristics within a potential region despite political boundaries. It is out of such commonalities that shared needs, interest and desires can be addressed using comprehensive R&D techniques. (2) Governance is the most obvious and useful way to build regional relationships. Each state is represented on the board of directors. Concerns of area constituents are reflected in various field based activities as well. (3) Working relationships (collegiality) is another measure of the effectiveness of a laboratory's region. If practitioners feel comfortable with staff and board representatives, they will support it as "theirs." "Psychological access" is thus an important consideration. (4) Geographical access, on the other hand, is less important today with improved travel and communication linkages. In time, two other criteria will be used to judge a regional laboratory's ability to stand as a mature institution worthy of support: the capacity to maintain (5) out-of-region linkages that extend the laboratory's partnership with institutions for the conduct of educational R&D nationwide and (6) national stature, recognition that a laboratory has the know-how to perform quality work in various areas of expertise and the products to prove it.

While geography is not a primary concern today, there are traditional practices that still tend to draw persons from a region together--social and economic patterns being a prime example. Alliances through existing

networks--say USOE regions and accrediting agencies--can also be a factor. The nature and extent of existing R&D resources in a proposed region must also be considered.

The advantages of a region include access to local field sites for development and testing assistance, long-range planning, advice and governance. Planners must beware that a region does not become so unwieldy in size to be ineffective in any of the above areas.

Where's the Best Place to Locate?

Deciding on a central spot to place a headquarters staff usually means identifying a population center that is linked to the region by a variety of reliable transportation options, that can draw on a pool of educational research and development resources and that offers the kinds of educational/cultural/recreational resources that will entice job applicants outside the region to relocate there. The obvious drawback of one operational center is that it will be placed in only one of the constituent states, raising the question about a need for smaller offices elsewhere to represent and carry out laboratory work. Laboratories that envisioned such a pattern in the mid-1960s have abandoned the idea today.

The headquarters of a new laboratory will be an important consideration since it must be within easy reach of constituents both in the region and nationally. The considerations that always affect location and that have been stumbling blocks in the past have to do with ownership--e.g., will constituents think one state is getting more than another. As long-term field activities are required for specific R&D efforts, satellite offices are often established for contract-related efforts only.

Who Should Monitor Progress?

In the press of planning and conducting its work, staff of a regional laboratory can easily overlook the people whose needs and interests are to be served and who will judge the quality of its performance. It is through carefully planned and continuous field relationships where vital support is nurtured--support that will be there despite the vagaries of federal policies and funding.

Most laboratories look to organizations and individuals with interests and responsibilities in education as the audience they must please. One way to monitor laboratory performance is to elect a broadly-based board of directors. An additional, more comprehensive approach is to invite interested organizations and individuals to affiliate with the laboratory as members--either free or for a fee. Benefits of this relationship include access to first-hand information on laboratory products, first-hand in field testing, participation in board member selection and collaboration on laboratory R&D activities. Annual meetings of members and/or constituents have not been successful for most laboratories. Newsletters or other

mailings to keep interested persons informed about laboratory activities are common whether or not there is a membership option. Briefings for interested agencies are also typical.

How Will the Organization Be Structured?

A regional laboratory requires an interstate superstructure or legal entity to receive funds and conduct work--typically a nonprofit corporation. Governance is usually in the hands of an active, committed board of directors broadly representing constituent interests and able to set policies and recommend program priorities for management and staff to implement.

A laboratory board typically will draw its membership from a wide variety of education and non-education groups--representatives who are well known both regionally and nationally. The average size is 24 persons with most boards electing an executive committee to make interim judgments between quarterly meetings of all directors.

Board meetings facilitate a two-way flow of communication between laboratory managers and individual board members. Program information is provided to the board and feedback is sought. All participants learn more about R&D as a result.

Representation on laboratory boards tends to be weighted in favor of institutions of higher education and public school administrators. Yet, boards continually look for persons from private and public sectors alike whose background and influence will be useful. Women and minorities, for instance, are being elected to boards more often as directors struggle to avoid becoming "in-grown." Boards are concerned continually about their role and responsibilities in the face of shifting federal priorities and want to spend their time making important policy decisions rather than handling housekeeping details.

Where Will the Buck Stop?

Finding the person who can manage the many facets of a regional educational laboratory requires great care in specifying criteria for the position: Will national reputation in an identified discipline be helpful? Will regional name recognition and respect be useful? Will experience in R&D be required? The mark of success is not unlike that needed by any chief executive of a large enterprise: an ability to work closely and effectively with people whether they are governing board members, constituents, clients or staff.

Four of the present eight directors have been at the helm of their respective institutions since the beginning in 1966. Each laboratory director brings a unique mix of skills and background to the job--often directly from higher education by way of local and state education agencies. The chief administrators of the multi-million dollar laboratories today have

accumulated experience in managing people, understanding of R&D, ability to work with a board of directors and familiarity with the school business, particularly across the region in question. Knowing how to relate to practitioners is critical, but perhaps even more important is understanding the ins and outs of federal decision-making in Washington D.C. Laboratory directors feel a special responsibility to look ahead at what educational needs can be addressed by R&D in the future and anticipate how resources can be garnered to meet those needs.

Who Will Want To Take These Risks As Staff Members?

Staff in a regional laboratory ideally represent a variety of disciplines and technical skills. Yet, the persons who do educational R&D are not easily found. On-the-job training has been used to good advantage in helping staff cope with the ambiguities, tight deadlines and "delayed gratification" that typify most laboratory work.

Staff in regional laboratories include women and minorities in positions that directly shape the content and functions of R&D work. They bring diverse backgrounds in education-related fields. Their R&D specialties are research, evaluation, development and training. They work hard at what they do and are committed to making schools better places to learn and teach in. Their bag of tricks includes skills in management, writing, problem solving and information retrieval. They take advantage of staff development opportunities to improve present skills and prepare for career advancement. They are not surprised if new R&D work requires a shift in assignments.

Regional laboratory staff must be aware of how they work with practitioners in the field and the images they project of R&D. All lab staff try to keep in touch with educational practices in the field and advances in their own professional interest areas. A futures orientation is also helpful.

Staff at regional laboratories are often supplemented by part-time staff and consultants retained as special needs arise. Maintaining continuity and morale as contracts come and go are two persistent staff problems, facing laboratory managers.

How Can We Organize To Bring Stability Out of Instability?

Most laboratories that remain active and well staffed in 1977 made an important decision early in their development: funding sources must be diversified. Coupled with periodic changes in federal policies and appropriations for R&D, this has seemed to be a wise move--partly because it keeps the organization flexible and constantly aware of new opportunities to serve. A balance of programs and projects cutting across a variety of subject domains enables a laboratory to move staff quickly as needs arise. Management in this kind of structure must be tough, yet open to the needs, concerns and involvement of staff in decision making and information-sharing.

One way to approach the balancing of resources and staff energies during any one year is to examine how much of an institution's time is devoted to four broad thrusts: (1) programs and projects that are research-oriented, perhaps leading to product development or policy decisions; (2) programs and projects that are in the development mode, where more laboratory staff are typically involved at any one time than any other activity; (3) programs and projects that are dissemination-oriented, designed to help move innovations into the field; and (4) programs and projects that are initiated because constituents and clients request particular services.

While some long-term R&D contracts help assure staff stability--allowing laboratories to build a cadre of staff with valuable expertise--laboratories often seek other kinds of balances as well:

1. Can we obtain funding for our R&D programs and projects from a variety of federal, state and local education and non-education agencies and organizations and show more and more people how educational R&D can benefit their work?
2. Can we address some R&D problems that are purely national concerns and others that are strictly local and regional? Others may be a mixture of national priorities and regional problems.
3. Can we plan our work so that large-scale, well-funded programmatic R&D provides the stability that enables us to deliver short-term "small-dollar" problem-solving services?

Laboratory management at all times strives to maintain as much flexibility as possible to assure that systematic R&D processes work smoothly. Support functions like policy making, planning and administrative services are underwritten by overhead and management fees. Equity funds are also used as special needs arise. How an organization chart is structured depends largely on how the balances described above are resolved.

Who Should Be Involved In R&D?

A distinguishing characteristic of a regional laboratory is its ability to pull together diverse individuals, groups and agencies in pursuit of a common cause. This catalytic role for laboratories requires an ability to communicate often and clearly--both formally and informally. Contacts range from formal program advisory boards meeting at the laboratory itself to informal appearances of laboratory staff at professional association conferences throughout the region. Each client or potential client must know that the laboratory is responsive and purposeful--a respect that comes from staff's demonstrated understanding of a client's problems.

A third level of constituent involvement illustrates again how a laboratory depends on a network of relationships for its success. An example is the active involvement of advisory committees for R&D work. Members usually

include nationally-known experts in substantive fields as well as persons from local educational agencies who interact with students and teachers on a daily basis. Such groups may be asked to help develop long-range plans, design products, choose pilot sites, review materials, work with other constituents and sometimes help make staff selections.

Ad hoc committees and consultants may also be brought in from time to time for special purposes.

Where Should We Focus Resources?

To make effective use of limited dollars for educational R&D, a regional laboratory must regularly review its programs and projects in light of regional needs and national priorities. Generally, laboratory activities are of two kinds: long-term programmatic R&D to attack a pervasive problem affecting general educational practice and short-term problem-solving projects that serve immediate client needs. Identification of the problem areas where educational R&D techniques can be effective is, a difficult but critical first step.

Techniques for identifying needs include:

- meetings with constituents across the region
- survey of educators and non-educators
- input from advisory committees
- contacts in the field by staff
- review by the laboratory's board of directors

Laboratories do not rely on just one approach, but prefer to use a mix of needs-sensing mechanisms.

The challenge for laboratories is translating needs into action without overpromising on results. Laboratory boards set their own criteria in determining what areas of work to pursue. Questions they might ask include:

1. Is this a real need as opposed to a transitory concern?
2. Can this need be attacked using R&D technology?
3. Can we take advantage of regional resources?
4. Does the problem have national implications?
5. How will the new work affect our present array of activities?
6. How willing is the funding agency to buy into the work?

A laboratory must constantly walk a tightrope between responding to a myriad of regional needs and maintaining its credibility and basic commitment to programmatic R&D.

How Can We Best Meet These Needs?

Most problem areas in education--whether widespread concerns affecting general educational practice or an immediate issue facing a single educational agency--are amenable to a systematic R&D process.

Laboratories may use different terminology in describing their research and development activities, but generally perform the following functions.

1. Problem Clarification

Laboratory staff work with the agency to break an educational problem into manageable pieces, agree on terminology, prepare a work scope, estimate resources, lay out the problems and so forth. Sometimes a decision is made not to proceed.

2. Research

Laboratories perform both basic and applied research because each is important to comprehensive R&D. Depending on the problem at hand, a laboratory will

- search out and synthesize others' research to lay a foundation for development
- extend others' research and translate it for application in field settings
- assess the effects of educational practices using a variety of methodologies in addition to experimental designs
- uncover and report information gaps while pursuing regular R&D work
- contribute to the existing research base by sharing new findings through professional channels.

3. Development

Moving good ideas into practice has required a creative yet systematic series of events which vary from institution to institution. Each laboratory seeks wide involvement with practitioners to supplement staff capabilities to handle development tasks from the concept and design stages all the way through exploratory, prototype, pilot and final field testing. Products range from traditional print and non-print media for classrooms to comprehensive processes for improving teaching and learning techniques.

4. Evaluation

As development proceeds, evaluation support is directly linked to each step. Two kinds of evaluation are typically employed: formative and summative. The first is an ongoing technique to gather data that assist decision makers in modifying a program; the second is designed to help sponsors and users judge product effectiveness.

5. Implementation

Laboratories anticipate the questions users will have when considering installation of a new educational product. Depending on product complexity, laboratories provide assistance ranging from a brief teacher's guide to a several-day seminar to train trainers in how to spread the innovation. Demonstration sites where users can see an innovation in practice have been used effectively by laboratories.

6. Dissemination

As a laboratory pursues work in a given program area, it begins to become recognized for accumulated experience. Questions arrive almost daily and staff find themselves responding directly to queries or referring requests elsewhere in the manner of a broker. This process is speeded if there is a network of R&D performers to exchange information and mutual aid.

7. General Problem-Solving Assistance

A natural spin-off of laboratory R&D is technical consultation on problems that may or may not be directly related to contracted work yet require the kind of talent and expertise staff offer. Most laboratories seize these opportunities as a way to learn more about adaptation of their products in new settings with different problems. While often difficult to manage, problem-solving service contracts do allow staff to pick up valuable field experience while providing revenue to help maintain key staff when times are lean.

8. Marketing

R&D products will have limited effectiveness if adequate thought has not been given to marketing the ideas vigorously. In many cases, commercial channels are used; for some, a laboratory may handle publication and distribution itself. Still other products will enter the public domain through ERIC or the Superintendent of Public Documents, Government Printing Office. In any case, laboratories take an active interest in spreading the word about their products to achieve the maximum impact possible.

A basic rule of thumb is that while the process is not linear it does require time. Each function is important; if there is a weak link the systematic and comprehensive nature of the process will be threatened.

What About the People Who Wanted It In the First Place?

As the world of educational R&D turns, it is easy to lose sight of original laboratory purposes and the people who wanted it so. Reputations for quality, cost-effective work that meets professional standards are built on an attitude of responsiveness and an ability to deliver and follow through on commitments. Qualities that people remember are success in using the R&D product (e.g., impact on learners, ease of installation), personal relationships with laboratory staff, responsiveness even if the requests are inopportune and the deadlines tight, appearance of the product, and its relevance to their needs and self interests. The ability to maintain a range of R&D services in a region is also strengthened when a laboratory can tie into a network of R&D performers--often working jointly to solve national problems.

RECOMMENDATIONS FOR A NEW REGIONAL LABORATORY

During the May workshop called to discuss key issues drawn from the above elements, key laboratory and NIE staff members offered the following recommendations to planners of new regional R&D institutions:

1. A regional laboratory must be able to perform in the following ways if it is to be distinguished from other R&D performers:
 - Demonstrate the capacity to conduct large-scale programmatic R&D that is responsive to national and regional priorities.
 - Demonstrate the ability to convene a wide range of individuals and organizations on neutral turf.
 - Demonstrate a commitment to the strengthening of educational R&D by demonstrating R&D skills to practitioners.
 - Demonstrate a staffing capability that draws on an essential core of skilled R&D managers and specialists, adding others as needed.
2. The service capacity of laboratories varies as the needs and impetus from regions vary. The key resources are time and dollars. Large-scale programmatic R&D requires time; problem-specific services, even if spin-offs from programmatic R&D, can be costly too. A laboratory must work with regional constituents to assess how responsive it can be given time and dollar parameters. The laboratory's board must take responsibility for defining these limits.

3. There is new hope for regional responsiveness given NIE's willingness to consider a services component in long-range planning. Accountability procedures for monitoring how federal dollars can be applied in state and local R&D problem-solving will vary according to whether needs are long-term and based on futures planning or whether they are short-range and designed to help educational agencies deal with immediate R&D problems.
4. A regional laboratory must remember there are some problems in every region that will never be addressed unless a laboratory takes the initiative. Wise use of laboratory resources often attracts additional input from state and local sources.
5. A laboratory governance structure that is truly responsive and "proactive" is the best mechanism for sensing needs in a region. Needs analysis is an interactive process, not one that can rely on one kind of data alone (e.g., a paper and pencil survey).
6. In defining its mission, a regional laboratory must continually reassess how far it should push or maintain the status quo, how far it should go in breaking new research ground or build upon the storehouse of existing knowledge, how quickly it can respond to problems without endangering ongoing R&D, how much it should try to do itself and how often it should share some of the load with others.
7. A regional laboratory should not become overly-dependent on one client or client group. That is, a laboratory will have difficulty if it tries to maintain a viable organization on small, problem-oriented service contracts alone so that a long-range mission to perform programmatic R&D is weakened. Likewise dependence on a single agency for funding is also difficult if that agency's coffers run dry.
8. A new laboratory must assess the existing political realities in a proposed new region very carefully by identifying who its clients are and then inventorying available R&D resources.
9. Governance is the most important reason for defining a region. State education agencies must be represented on boards but if a state desires to be involved in the governance of more than one laboratory, that is fine. It is better for whole states to be involved than for parts of states to be split between laboratories.
10. Planners for a new laboratory should deemphasize concerns about geographical access and recognize that "psychological access" may be more important. Will people feel comfortable approaching you? Will they feel you have something useful to offer?

11. When considering the formation of a new regional laboratory, invite states interested in participation to respond. The choice must always be left to states. Social, cultural and physical characteristics are important, but compatibility, mutual understanding and respect will be deciding factors in the long run.
12. A regional laboratory should be encouraged to maintain a range of out-of-region linkages. Such ties are two-way in nature: bringing ideas and resources into the mainstream of laboratory work from around the nation while spreading the impact of laboratory R&D beyond a region through activities like field testing and dissemination.
13. With a ten-year history of operation, existing laboratories offer useful models for handling business, personnel and field relations functions, to name a few. Packaging and sharing these insights will make the work of new laboratories a lot easier.
14. Staffing a regional laboratory requires a careful mix of persons with intellectual skills, management skills, content-specific or substantive skills, and interpersonal skills. Individuals should be sought who can maintain credibility and stability in spite of the ambiguity that marks a laboratory's environment.
15. NIE and the laboratories might both benefit from the creation of on-site institutional monitors who would represent the Institute's interests and provide liaison between lab staff and program offices in Washington. NIE program unit staff would thus be freed for long-range planning and integration of R&D findings from its national network of contractors of which laboratories are a significant part.
16. Laboratories use their management fees and overhead cost structure to maintain several vital functions, such as retention of key staff between contracts, resource development, dissemination, information services, and so forth.
17. If a regional laboratory drops below one million dollars in annual revenues it will be difficult to sustain a viable organization. Programmatic R&D and minimal institutional support services require a sizable chunk of dollars. After its initial shakedown period, a new laboratory will need a three million dollar minimum budget to do a credible job.
18. Laboratories will work more closely together as a network of R&D performers if given incentives to do so. Institutional funding rather than competitive procurement is one step in that direction. Self-interest and cooperation are not contradictory. More programs like the R&D Exchange and Training of Women and Minorities in R&D are useful in assuring interinstitutional planning. The Institute and laboratories alike will benefit from harmonious relationships built on a spirit of trust.